Check List the journal of biodiversity data

LISTS OF SPECIES

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Checklist of plants of Rashad and Alabassia localities (eastern Nuba Mountains), South Kordofan Sudan

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Abstract: This study identifies and documents species of the native flora the low rainfall woodland savanna of Rashad and Alabassia localities (eastern Nuba Mountains), Sudan. This study identified 260 species belonging to 176 genera and 59 families, including five new records to the flora of the Sudan. The flora is comprised of a variety of different life-forms. Most are phanerophytes 40%, therophytes 35%, and chamaephytes 21%; the remaining are geophytes, hydrophytes, hemicryptophytes and epiphytes. The majority of the plant species have important economic uses.

Key words: flora, vegetation of Sudan, biodiversity, lifeforms, economic uses

INTRODUCTION

A thorough knowledge of the flora of a certain area is an essential prerequisite to sound land-use policy. The present study fills a gap in our knowledge of the flora of Rashad and Alabassia localities, eastern Nuba Mountains, Sudan. Furthermore, this contribution provides a reliable scientific basis for the assessment of the production potential and management of plant resources in the study area.

The flora of the Nuba Mountains is rarely covered in literature, either on its own or as part of the larger Sudan flora. The earliest collections from the area was reported by Massey (1926) who recorded three grasses. Shortly thereafter, Broun and Massey (1929) included 128 plant species from the area. In works of Andrews (1950, 1952, 1956) only 24 plant species from the area were recorded. Elamin's (1990) publication on the trees and shrubs of the Sudan included 66 woody plant species from the Nuba Mountains.

The flora of certain locations, including some special habitats, in the Nuba Mountains has been studied. El Ghazali (1985) recorded 178 medicinal plants from the eastern Nuba Mountains. Ismail (2007) studied the woody vegetation of Rashad district and recorded 87 indigenous species and 15 exotic species.

The region in the eastern Nuba Mountains ,selected for the present study, exhibits wide topographical variation which is reflected in the diversity of vegetation. This study aims to identify and document the flora of the eastern Nuba Mountains and consequently to contribute in updating the flora of Sudan. Vouchered specimens also contribute the reference collection in the Forestry Research Centre herbarium at Soba, Sudan.

MATERIALS AND METHODS

Study area

The study area is located in the northern part of the eastern Nuba Mountains of South Kordofan state, Sudan, and includes two localities (Rashad and Alabassia), extending from 11˚33′ to 12˚33′ N and from 031˚08′ to 031˚18′ E. (Figure 1). Most of study has scattered isolated hills and it is dissected by many seasonal watercourses. The Rashad and Alabassia localities occupy an area of 7872 km² (Adam et al. 2012). The study area classified as low rainfall woodland savanna (Harrison and Jackson 1958).

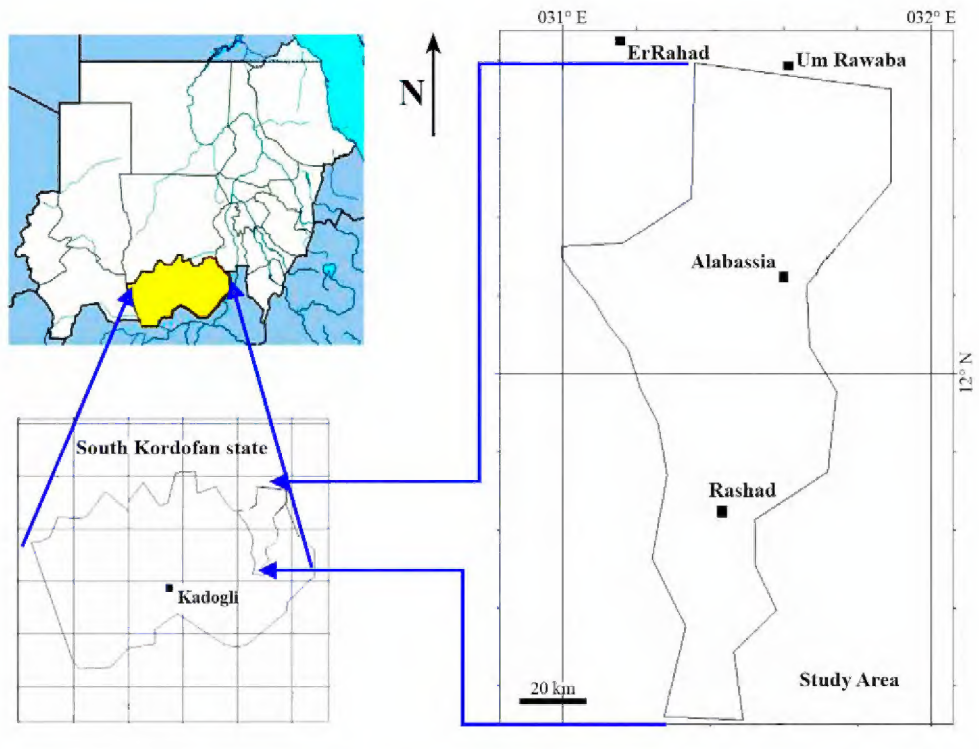

Figure 1. Study area: Rashad and Alabassia localities, South Kordofan state, Sudan.

Specimen collection and identification

Plant specimens were collected during 2010–2011. The collection procedure followed methods described by Lawrence (1969) and Forman and Bridson (1991). Specimens were identified using Broun and Massey (1929), Andrews (1950, 1952 and 1956), and Elamin (1983, 1990). Identified specimens were confirmed with authenticated herbarium specimens in the Forestry Research Centre Herbarium at Soba.

Recent literature was consulted for current plant names: Friis and Vollesen (1998, 2005) and The Plant List (2013). The list of families covered in this study was arranged according to the Linear Angiosperm Phylogeny Group (LAPG) III (Haston et al. 2009), while subfamilies, genera, and species are arranged alphabetically within the families. Vernacular names and economic uses given were compiled from local people and available literature. The life-forms of plants were based on Raunkiaer (1934).

RESULTS

A detailed botanical account on the flora is given in the form of a checklist. Altogether 260 plant species, beloning to 59 families and 176 genera (Table 1) were identified. This number exceeds the number of species recorded previously from the Nuba Mountains.

The flora is grouped into 11 clades. Most of the species belong to the core eudicots/rosids/fabids (eurosids I) (78 species, 42 genera and 10 families); core eudicots/rosids/malvids (eurosids II) (54 species, 35 genera and 12 families); eudicots/asterids/lamids (euasterids I) (44 species, 37 genera and 12 families); monocots commelinids (39 species, 24 genera and four families) and each of the other clades include less than 20 species (Figure 2). The families Fabaceae (Leguminosae), Poaceae and Malvaceae are well represented in the flora of South Kordofan. Asteraceae and Euphorbiaceae are moderately present, while other families had between one and nine species (Figure 3).

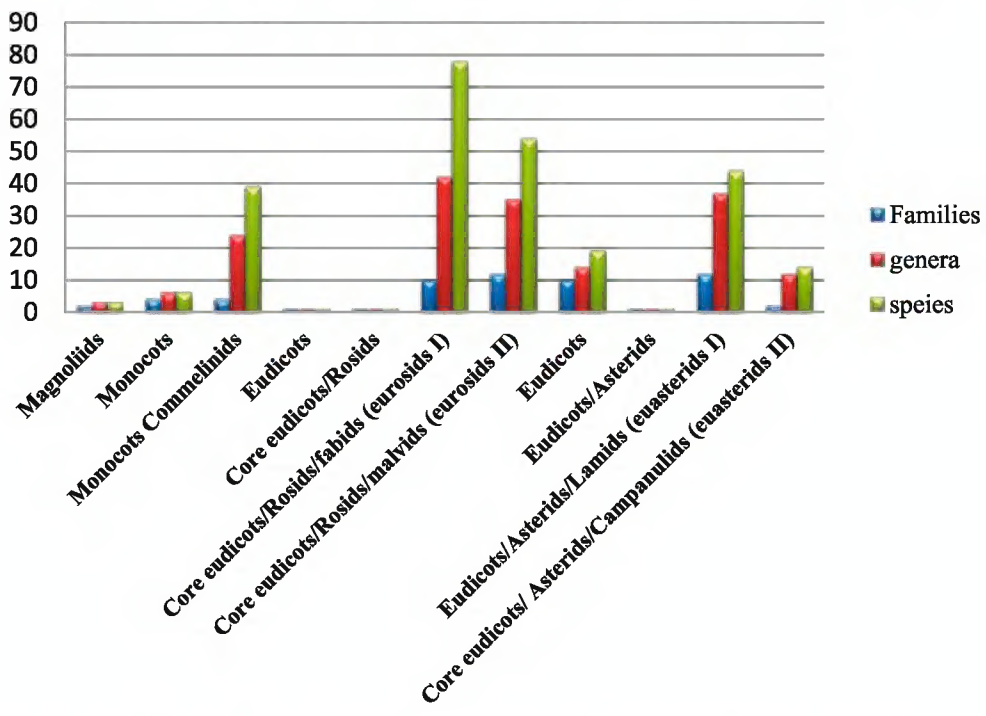

Figure 2. The plant species, genera and families included by clades.

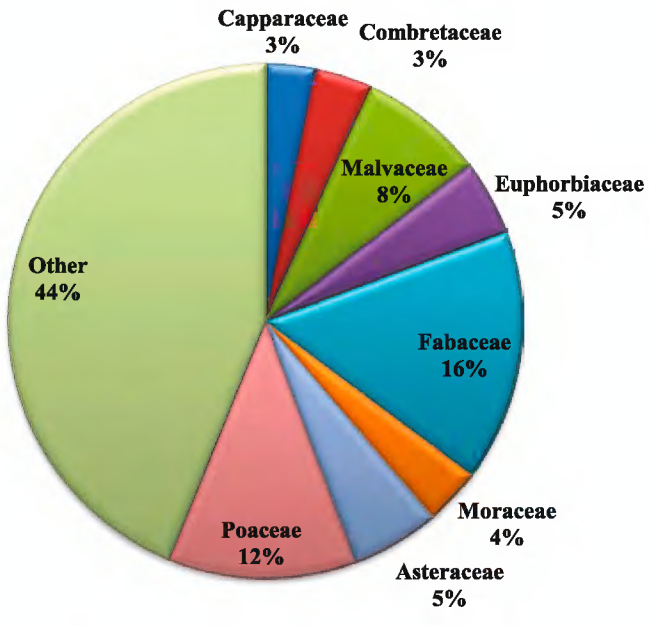

Figure 3. Distribution of plant species by family.

In this study, five species were added to the flora of Sudan: *Ludwigia adscendens* (Onagraceae), *Commicarpus chinensis* (Nyctaginaceae), *Crotalaria lanceolata* (Fabaceae), *Goniocaulon indicum* (Asteraceae) and *Tetrapogon tenuellus* (Poaceae).

DISCUSSION

Most of the plant species of the study area have important economic uses. The study area is considered as important sources for animal wellbeing; 26% of the species are fodder plants. However, an important alternative to fodder is woody vegetation, which is browsed by animals during the dry season. Both herbaceous and woody plants (39%) are used for medicinal purposes. Large trees and shrubs (7% of total flora) are utilized for timber that is used for making furniture, tool handles, and as building material (roofing, fencing, etc.). Timber is used for building material and other domestic uses such as roofing, fencing and as tool handles. Species used for fuel wood (8%) are important source sof energy. Plants (15%) also have edible fruits that are important during periods of famine. Some species (2%) produce gums: gum arabic from *Acacia senegal* and frankincense gum from *Boswellia papyrifera* and *Commiphora africana* Figure (5).

Endangered species

This survey found that a number of economically important woody plants may be endangered. This includes *Borassus aethiopum*, a tree that is extensively cut for roof poles when mature; its germinating seeds are also dug for food ("Halook").. It is now only in protected

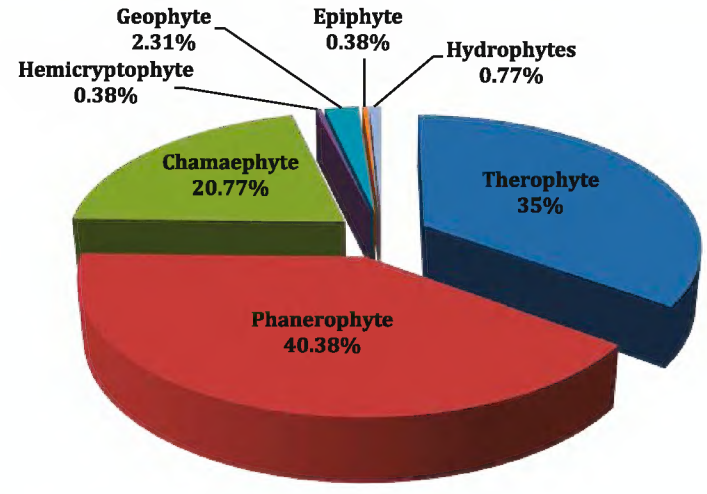

Figure 4. Life-form categories.

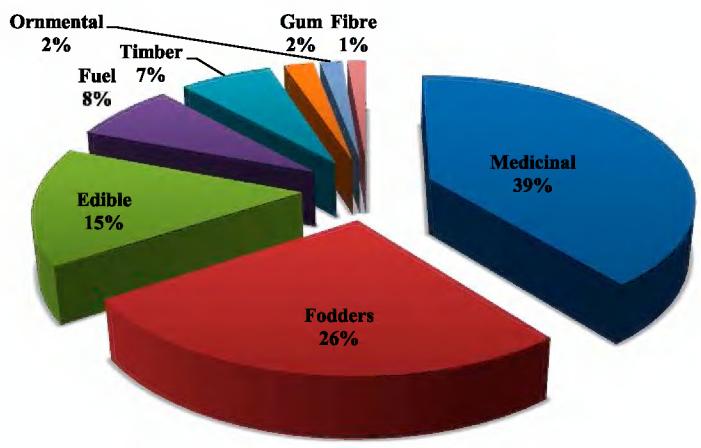

Figure 5. Economic uses of plant species.

areas such as gardens and around houses. *Hyphaene thebaica* was found only around houses as well. *Cordia africana* was observed only in gardens and aorund houses but were growing naturally. No regeneration of *Boswellia papyrifera* was recorded at the sites studied.

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Table 1. Checklist of Flora of Rashad and Alabassia localities, Nuba Mountains, Sudan. Life forms: Ph = phanerophyte, Th = therophyte, Ch = chamaephyte, G = geophytes, Hy = hydrophyte, He = hemicryptophyte, Ep = epiphyte. Economic uses: Fd = fodder, M= medicinal, T = timber, Fu = Fuel wood, Ef = edible fruit, G =gum.

Taxa	Species	Vernacular name	Life form	Uses
Clade Magnoliids				
Order Piperales				
Family Aristolochiaceae				
Subfamily Aristolochioideae	*Aristolochia bracteolata* Lam.	Um Jalajil,	Ch	M
Order Magnoliales				
Family Annonaceae	*Annona senegalensis* Per.	Harhar, Gishta	Ph	T, M,E
	Xylopia acutiflora (Dunal) A. Rich.	Kurnagang	Ph	T, M,E
Clade Monocots				
Order Alismatales				
Family Araceae				
Subfamily Aroideae	*Amorphophallus abyssinicus* (A. Rich.) N. E. Br.		G	E
	Pistia stratiotes L.		Hy	M
	Stylochaeton hypogaeus Lepr.	Basal Elkilab	G	M,E

Continued

Table 1. *Continued.*

Taxa	Species	Vernacular name	Life form	Uses
Order Asparagales				
Family Xanthorrhoeaceae				
Subfamily Asphodeloideae	*Aloe sinkatana* Reynolds, J. S.	Sabar	G	M
Family Amaryllidaceae				
Subfamily Amaryllidoideae	*Scadoxus multiflorus* (Martyn) Raf.	Gash El Fil	G	O
Family Asparagaceae				
Subfamily Asparagoideae	*Asparagus flagellaris* (Kunth) Baker.		Ch	M,E
Clade Monocots Commelinids				
Order Arecales				
Family Arecaceae				
Subfamily Coryphoideae	*Borassus aethiopum* Mart.	Deleib	Ph	M, E, T
	Hyphaene thebaica (Linn.) Mart.	Dom	Ph	M, E, T
Order Commelinales				
Family Commelinaceae				
Subfamily Commelinoideae	*Commelina benghalensis* L.	Bayad	Th	Fd
	Commelina imberbis Ehrenb. ex Hassk.	Ibrig El Faki	Th	Fd
Order Poales				
Cyperaceae	*Cyperus amabilis* L	Seida	Th	M
	Cyperus dives Delile.	Seida	G	M
	Cyperus rotundus L.	Seida	G	M
	Kyllinga squamulata Vahl.		Th	M
Family Poaceae				
Subfamily Aristidoideae	*Aristida hordeacea* Kunth.	Danab Elkadees	Th	Fd
	Aristida mutabilis Trin. & Rupr.	Milesa	Th	Fd
Subfamily Bambusoideae	*Oxytenanthera abyssinica* (A. Rich.) Munro.	Ganna	Ph	Fd
Subfamily Chloridoideae	*Chloris pilosa* Schumach. & Thonn.	Abu Malhi	Th	Fd
	Chloris virgata Swartz.	Um Faru	Th	Fd
	Dactyloctenium aegyptium (L.) Willd.	Um Asabi	Th	Fd
	Eragrostis aspera (Jacq.) Nees.		Th	Fd
	Eleusine indica (L.) Gaertn		Th	Fd
	Eragrostis cilianensis (All.) Vign. ex Janchen.	Gash Elnamil	Th	Fd
	Eragrostis ciliaris (L.) R.Br.		Th	Fd
	Eragrostis japonica (Thunb.) Trin.		Th	Fd
	Eragrostis tremula Steud.	Bannu	Th	Fd
	Microchloa indica (L.f.) P.Beauv.		Th	Fd
	Schoenefeldia gracilis Kunth.	Um farida	Th	Fd
	Sporobolus festivus Hochst. ex A.Rich.	Korieb, Um Tuk	He	Fd
	Tetrapogon cenchriformis (A. Rich.) W. D. Clyton.	Difra	Th	Fd
	Tetrapogon tenellus (Roxb.) Chiov.		Th	Fd
Subfamily Panicoideae	*Brachiaria xantholeuca* (Hack.) Stapf.	Um Chir	Th	Fd
	Cymbopogon nervatus (Hochst.) Chiov.	Nal	Th	Fd
	Echinochloa rotundiflora Clayton.	Um-balil	Th	Fd
	Hyparrhenia confinis var. *nudiglumis* (Hack.) Clayton	Um Sileila	Th	Fd
	Ischaemum afrum (J.F. Gmel.) Dandy.		Th	Fd
	Melinis repens (Willd.) Zizka.		Th	Fd
	Panicum callosum Hochst. ex A.Rich.		Th	Fd
	Pennisetum nubicum (Hochst.) K.Schum. ex Engl		Th	Fd
	Pennisetum pedicellatum Tan.	Danab Elkadees,	Th	Fd
	Pennisetum polystachion (L.) Schult.		Th	Fd
	Pennisetum purpureum Schumach.	Danab Elkalib	Th	Fd
	Pennisetum ramosum (Hochst.) Schweinf.		Th	Fd
	Setaria pumila (Poir.) Roem. & Schult.	Danab Elkalib	Th	Fd
	Setaria verticillata (L.) P.Beauv	Abu elliseg	Th	Fd
Clade Eudicots				
Order Ranunculales				
Family Papaveraceae				
Subfamily Papaveroideae	*Argemone mexicana* L.		Ch	M
Clade Core eudicots/Rosods				
Order Vitales				
Family Vitaceae				
Subfamily Vitoideae	*Cissus petiolata* Hook. f.		Ph	M
	Cissus quadrangularis L.	Salala	Ph	M

Continued

Table 1. *Continued.*

Taxa	Species	Vernacular name	Life form	Uses
Clade Core eudicots/Rosids/fabids (eurosids I)				
Order Zygophyllales				
Family Zygophyllaceae				
Subfamily Tribuloideae	*Balanites aegyptiaca* (L.) Delile	Heglig	Ph	T, E, Fd, M
	Tribulus terrestris L.	Direisa	Th	Fd
Order Celastrales				
Family Celastraceae				
Subfamily Celastroideae	*Maytenus senegalensis* (Lam.) Exdl.	Yoi	Ph	M
Order Fabales				
Family Fabaceae				
Subfamily Caesalpinoideae	*Bauhinia rufescens* Lam.	Kulkul	Ph	Fu, M
	Bauhinia reticulata DC.	Kharub	Ph	E, T, Fd,
	Cassia sieberana DC.	Um Kashu	Ph	T, Fu, O, M
	Chamaecrista mimosoides (L.) Greene		Ch	M
	Senna italica Mill.	Sin Elkalib	Ch	M
	Senna obtusifolia (L.) Irwin & Barneb	Kawal	Ch	E
	Senna occidentalis (L.) Link.	Soreeb	Ch	M,E
	Tamarindus indica L.	Aradeib	Ph	E, Fd
Subfamily Mimosoideae	*Acacia gerrardii* Benth.	Salgam	Ph	Fu, M
	Acacia mellifera (Vahl) Benth.	Kitir	Ph	Fu, , Fd
	Acacia nilotica subsp. *adstringens* (Schum. & Thonn.) Roberty.	Sunut	Ph	T, Fd, M
	Acacia oerfota (Forssk.) Schweinf	Laot	Ph	M
	Acacia polyacantha Willd.	Kakamut	Ph	G, Fd, M
	Acacia senegal (L.) Willd.	Hashab	Ph	G, Fd, Fu
	Acacia seyal Del. var. seyal	Talih	Ph	G, Fd, Fu, M
	Acacia sieberiana DC.	Kuk	Ph	T, Fu
	Acacia tortilis (Forssk.) Hayne subsp. *raddiana* (Savi) Brenan	Sayal	Ph	Fd
	Albizia amara (Roxb.) Boiv.	Arad	Ph	T, Fu
	Albizia anthelmintica Brongn	Girfat Addud	Ph	Fd, M
	Albizia aylmeri Hutch.	Sireira	Ph	T
	Dichrostachys cinerea (L.)White & Arn.	Kadad	Ph	Fu, Fd
	Faidherbia albida (Del.) Chev.	Haraz	Ph	T, E
	Prosopis africana (Guill. & Perr.) Taub.	Abu-surug	Ph	Fd
Subfamily Faboidae	*Alysicarpus glumaceus* (Vahl) DC.		Ch	Fd
	Crotalaria lanceolata E. Mey.		Th	Fd
	Crotalaria goreensis Guill. & Perr.		Ch	Fd
	Crotalaria ochroleuca G. Don		Ch	Fd
	Crotalaria ononoides Benth.		Ch	Fd
	Crotalaria senegalensis (Pers.) Bacle ex DC.	Sifeira	Th	Fd
	Dalbergia melanoxylon Guill. & Perr.	Babanous	Ph	T, M, Fd
	Erythrina abyssinica DC.	Hab Elaroos	Ph	O, M
	Indigofera arrecta A. Rich.		Ch	Fd
	Indigofera hirsuta L.		Th	Fd
	Indigofera cordifolia B. Heyne ex Roth		Th	Fd
	Indigofera hochstetteri Baker	Sharaya	Th	Fd
	Indigofera nummulariifolia (L.) Livera		Th	Fd
	Indigofera spicata Forssk.		Ch	M
	Lonchocarpus laxiflorus Guill. & Perr.	Khashkhash Azrag	Ph	T, Fu, M
	Mundulea sericea (Willd.) A. Chev.	Abu-galinga	Ph	M
	Sesbania leptocarpa DC.		Ph	Fd
	Stylosanthes fruticosa (Retz.) Alston		Th	Fd
	Tephrosia uniflora Pers.	Irg El Tais, Abu Rassein	Ch	Fd
	Zornia glochidiata Reichb. ex DC.	Sheleni	Th	Fd
Order Rosales				
Family Rhamnaceae	*Ziziphus abyssinica* Hochst. ex A. Rich.	Nabag Elfeel	Ph	T, E, Fd
	Ziziphus spina-christi (L.) Desf.	Nabag,	Ph	T, E, Fd
Family Ulmaceae	*Celtis toka* (Frossk.) Hepper &Wood	Mohagria	Ph	Fu, M
Family Moraceae	*Antiaris toxicaria* subsp. *africana* (Engl.) C. C. Berg		Ph	T
	Ficus abutilifolia (Miq.) Miq.	Gumaiz	Ph	E
	Ficus cordata subsp. *salicifolia* (Vahl) C .C. Berg Thumb.	Um Sisi	Ph	M
	Ficus glumosa Del.	Gumaiz	Ph	T

Continued

Table 1. *Continued.*

Taxa	Species	Vernacular name	Life form	Uses
	Ficus ingens Miq.	Gumaiz	Ph	E
	Ficus platyphylla Del.	Gumaiz	Ph	M
	Ficus populifolia Vahl.	Gumaiz	Ph	E
	Ficus sycomorus L.	Gumaiz	Ph	E
	Ficus thonningii Blume.	Irkabi	Ph	M
Order Cucurbitales				
Family Cucurbitaceae				
Subfamily Cucurbitoideae	*Ctenolepis cerasiformis* (Stocks) C. B. Clarke.	Sim Elter	Th	M
	Cucumis metuliferus E.Mey. ex Naudin	Tibish Elkilab	Th	M
	Cucumis prophetarum L.	Fagoos Elmarfaeen	Th	M
	Lagenaria siceraria (Molina) Standley	Garaa or Bukhsa	Th	M
	Luffa cylindrica (L.) M. J. Roem.	Leef	Ch	M
	Momordica balsamina L.	Erra Iri	Th	M
Order Malpighiales				
Family Euphorbiaceae				
Subfamily Acalyphoideae	*Acalypha indica* Linn.		Th	M
	Cephalocroton cordofanus Hochst.		Ch	Fd
	Dalechampia scandens L. var. *cordofana* (Webb) Müll.	Abu Liseig	Th	
	Ricinus communis L.	Khirwa	Ph	M
Subfamily Crotonoideae	*Croton zambesicus* Muell.	Um Ghilela	Ph	M
	Jatropha aethiopica Muell.	Abu ofein	Ch	M
Subfamily Euphobioideae	*Euphorbia candelabrum* Trémaux ex Kotschy	Shagar El-sim	Ph	M
	Euphorbia heterophylla Wild.		Th	M
	Euphorbia hirta L.	Um libena	Th	M
	Euphorbia prostrata Ait. Hort.	Um libena	Th	M
	Euphorbia venenifica Tremaux ex Kotschy	Shagar El-sim	Ph	M
Family Phyllanthaceae	*Bridelia micrantha* (Hochst) Baill.	Reel	Ph	T, Fu, M
Family Passifloraceae				
Subfamily Passifloroideae	*Adenia venenata* Forssk.	Kudur	Ph	M
Clade Core eudicots/Rosids/malvids (eurosids II)				
Order Myrtales				
Family Combretaceae	*Anogeissus leiocarpus* (DC.) Guill. & Perr.	Sahab	Ph	T, Fu, Fd, M
	Combretum aculeatum Vent.	Shuheit	Ph	Fu, Fd, M
	Combretum collinum subsp. *binderianum* (Kotschy) Okafa.	Elhabeel	Ph	T, Fu
	Combretum glutinosum Perr. ex DC.	Habeel	Ph	Dyes
	Combretum hartmannianum Schwein f. Beitr.	Habeel	Ph	M
	Combretum molle R.Br. ex G. Don.	Habeel	Ph	T, Fu, M
	Guiera senegalensis J. F. Gmel.	Ghibaish	Ph	Fu, M
	Terminalia brownii Fresen	Subagh	Ph	T, M
	Terminalia laxiflora Engl. & Diels Monogr.		Ph	T, M
Family Lythraceae	*Ammannia auriculata* Willd.	Tamr Elfar	Th	M
	Woodfordia uniflora (A.Rich.) Koehne.	Wad Am Elshai	Ph	G
Family Onagraceae				
Subfamily Ludwigioideae	*Ludwigia erecta* (L.) Hara.		Th	Fd,E
	Ludwigia adscendens (L.) Hara.		Hy	M
Order Sapindales				
Family Burseraceae	*Boswellia papyrifera* (Del.) Hochst.	Taragtarag	Ph	G, M, Fu
	Commiphora africana (A. Rich) Engl.	Gaffal	Ph	G,
Family Anacardiaceae	*Lannea humilis* (Oliv.) Engl.	Leyun	Ph	E, M
	Lannea fruticosa (Hochst. ex A. Rich.) Engl.	Leyun	Ph	T
	Lannea schweinfurthii (Engl.) Engl.	Rutrut	Ph	E, M, Fd
	Lannea schimperi (Hochst. ex. A. Rich.) Engl.	Elmilais, Amzaq	Ph	Fu, E
	Sclerocarya birrea (A. Rich.) Hochst.	El Homeid	Ph	T, E, M
Family Sapindaceae	*Allophylus africanus* P. Beauv.		Ph	M
	Cardiospermum halicacabum L.		Th	M
Family Rutaceae	*Vepris nobilis* (Del.) Mziray	Fideila	Ph	M
Family Meliaceae	*Khaya senegalensis* (Desr.) A. Juss.	Mahogani	Ph	T, M
	Trichilia emetica Vahl.	Dimso	Ph	T
Order Malvales				
Family Malvaceae				
Subfamily Bombacoideae	*Adansonia digitata* Linn.	Tabaldi	Ph	E, M, Fd, E, Fb

Continued

Table 1. *Continued.*

Taxa	Species	Vernacular name	Life form	Uses
Subfamily Grewiodeae	*Corchorus pseudocapsularis* Schweinf.		Th	Fd
	Corchorus tridens L.	Khodra	Ch	E
	Grewia bicolor Juss.	Basham	Ph	Fu,T, Fd
	Grewia flavescens Juss.	Khlekhsan	Ph	Fu,E, Fd, M
	Grewia mollis Juss.	Basham	Ph	Fu, E
	Grewia tenax (Forsk.) Fiori.	Elgudiem	Ph	Fu, E, Fd
	Grewia villosa Willd.	Tikko	Ph	Fu, E, M
	Triumfetta pentandra J.M. Garg	Abu liseig	Ch	Fd ,E, M, Fd,
Subfamily Malvoideae	*Abelmoschus esculentus* (L.) Moench	Weika	Th	E
	Abutilon angulatum (Guill. & Perr.) Mast.	Amboru	Ch	Fb
	Azanza garckeana (F. Hoff.) Exell & Hillcoat.	Nakhgar	Ph	E, G
	Hibiscus diversifolius Jacq.		Ch	Fb, M
	Hibiscus vitifolius L.		Th	Fb, M
	Hibiscus cannabinus L.	Kirkaiya, Kenaf, Til	Ch	Fb
	Sida alba Linn.	Um-shadia	Ch	M
	Sida cordifolia L.	Nayada	Ch	M
	Wissadula amplissima (L.) R. E. Fr. Kongl.		Ch	M
Subfamily Sterculiodeae	*Sterculia setigera* Del.	Tartar	Ph	G, M
	Waltheria indica L.	Erg Elnal	Ch	M
Order Brassicales				
Family Salvadoraceae	*Dobera glabra* (Forssk.) Juss. ex Poir.	Mikah	Ph	Fd,
Family Capparaceae	*Boscia angustifolia* A. Rich.	Elsereh, Serha	Ph	Fu , E, Fd, M
	Boscia senegalensis Lam.	Mikhiet, Kursn	Ph	E, Fd, M
	Cadaba rotundifolia Forssk.	Kurmut	Ph	Fd, M
	Capparis deciduas (Forsk.) Edgew.	Tundub	Ph	Fu, E, Fd
	Capparis tomentosa Lam.	Murdu	Ph	Fd, M
	Crateva adansonii DC.	Dabkar	Ph	T, Fu, Fd
	Maerua angolensis DC.	Shagar Eldoud	Ph	T, Fd, M
Family Cleomaceae	*Cleome gynandra* L.	Tamaleka	Ch	E
Clade Eudicots				
Order Santalales				
Family Olacaceae	*Ximenia americana* L.	Kalto	Ph	E, Fd, M
Family Loranthaceae	*Tapinanthus globiferus* (A. Rich.) Tiegh.	Anaba	Ep	Fd, M
Order Caryophyllales				
Family Tamaricaceae	*Tamarix nilotica* (Ehrenb.) Bunge	Tarfa	Ph	T
Family Plumbaginaceae				
Subfamily Plumbaginoideae	*Plumbago zeylanica* L.		Ch	M
Family Caryophyllaceae	*Polycarpaea corymbosa* (L.) Lam.	Um Fara	Th	O
Family Amaranthaceae				
Subfamily Amaranthoideae	*Achyranthes aspera* L.	Fakhah	Th	M
	Amaranthus graecizans L.	Lisan Elteir	Th	Fd
	Amaranthus hybridus L.	Khadiga kouro	Th	Fd
	Celosia argentea L.	Danab Elkalib	Ch	O, M
	Celosia trigyna L.		Th	M
	Pupalia lappacea (Linn) Juss.	Abu Luseg	Ch	M
Subfamily Gomphrenoideae	*Alternanthera pungens* Kunth.	Haskaneet	Ch	Fd
Family Aizoaceae				
Subfamily Sesuvioideae	*Zaleya pentandra* (L.) C.	Rigl Eltir	Ch	M, Fd
Family Nyctaginaceae	*Boerhavia africana* Lour.	Abu Libin	Ch	M
	Boerhavia chinensis (L.) Rottb.		Ch	E, M
	Boerhavia diffusa L.	Um Shiraya	Th	M
	Boerhavia erecta L.	Gashayt Elter	Th	E, Fd, M
Family Molluginaceae	*Glinus lotoides* L.	Raba'a	Th	M, Fd
Family Portulacaceae	*Portulaca oleracea* L.	Rigla	Th	E
Clade Eudicots/Asterids				
Order Ericales				
Family Ebenaceae	*Diospyros mespiliformis* Hochst. ex A. DC.	Goghan	Ph	T, E, Fd, M
Clade Eudicots/Asterids/Lamids (euasterids I)				
Order Gentiales				
Family Rubiaceae				
Subfamily Cinchonoideae	*Sarcocephalus latifolius* (Smith) E. A. Bruce.	Karmadoda	Ph	E, M

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Table 1. *Continued.*

Taxa	Species	Vernacular name	Life form	Uses
Subfamily Ixoroideae	*Catunaregam nilotica* (Stapf.) Tirveng.	Shagart Elmarfaein	Ph	Fu, M
	Feretia apodanthera Del.	Shai Elbitera	Ph	E,
	Gardenia ternifolia var. *jovis-tonantis* (Welw.) Verdc.	Baggis	Ph	M
	Meyna tetraphylla (Schweinf. ex Hiern) Robyns.	Simeim	Ph	E
	Vangueria madagascariensis Gmel.	Kirkir	Ph	E
Subfamily Rubioideae	*Oldenlandia corymbosa* L.	Bushari	Th	M
	Spermacoce pusilla Wall.	Tamr Elfar	Th	M
Family Loganiaceae	*Strychnos innocua* Del.	Um Bikhesa	Ph	E, T, Fd, M
Family Apocynaceae				
Subfamily Apocynoideae	*Adenium obesum* (Forssk.) Roem & Schult.	Shagar Elsim	Ph	O, M
Subfamily Asclepiadoideae	*Calotropis procera* (Aiton) Dryand.	Elushar	Ph	M
	Pergularia daemia (Forssk.) Cheov.		Ch	
Unplaced in an order				
Family Boraginaceae	*Cordia africana* Lam.	Gimbeel	Ph	T, E
Order Solanales				
Family Convolvulaceae	*Astripomoea lachnosperma* (Choisy) A. Meeuse	Um Ghaleila	Ch	M
	Ipomoea cordofana Choisy.	Tabar	Th	Fd
	Ipomoea sinensis (Desr.) Choisy.	Hantut	Th	Fd
	Ipomoea eriocarpa R. Br.		Th	Fd
	Ipomoea calophylla Fenzl.	Um She`era	Th	M
	Merremia aeygptia (L.) Urb.	Erg M`oterash	Th	M
Family Solanaceae				
Subfamily Solanoideae	*Datura innoxia* Mill.	Sikeran	Ch	M
	Physalis peruviana L.	kurm kurum	Ch	M
	Solanum coagulans Forssk.	Gubein	Ch	M
	Solanum hastifolium Hochst. ex Dunal.		Ch	M
	Solanum incanum L.	Gubein	Ch	M
	Solanum nigrum L.	Um Gibin gibin	Th	M
	Withania somnifera (L.) Dunal.	Morgan, Sim Elfar	Ch	M
Order Lamiales				
Family Scrophulariaceae	*Striga hermonthica* (Del.) Benth.	Bouda	Th	M
Family Pedaliaceae	*Rogeria adenophylla* J.Gray ex Del.		Ch	M
	Sesamum radiatum Schumach.	Simsim Eljebal	Th	E, M
Family Lamiaceae	*Leonotis nepetifolia* (L.) R. Br.	Kashaw	Ch	M
	Leucas martinicensis R. Br.	Baraw	Th	M
	Ocimum americanum L.	Rehan	Ch	M
Family Acanthaceae				
Subfamily Acanthoideae	*Barleria prionitis* L		Ch	M
	Barleria steudneri C. B.		Ch	
	Blepharis linariifolia Pers.	Baghel	Th	Fd
	Dicliptera verticillata (Forssk.) Christens.		Th	M
	Hypoestes verticillaris (L. f.) Solander ex Roem. & Schult.		Ch	E, M, Fd
	Hygrophila auriculata (Schumach.) Heine.	Abu Shweika	Ch	M
	Monechma debile (Forssk.) Nees.		Th	
	Peristrophe paniculata (Forssk.) Brummitt.	Abu Rukab	Th	M, Fd
Family Bignoniaceae	*Kigelia africana* (Lam.) Banth.	Um Shutour	Ph	T, M
	Stereospermum kunthianum Cham.	Khashkhash abiad	Ph	Fu, M, Fd
Family Verbenaceae	*Clerodendrum capitatum* (Willd.) Schumach. & Thonn.		Ch	M
	Vitex doniana Sweet.	Um-Togulgul	Ph	T, E, M
Clade Core Eudicots/ Asterids/Campanulids (euasterids II)				
Order Asterales				
Family Asteraceae				
Subfamily Asteroideae	*Acanthospermum hispidum* DC.	Hurab hawsa	Th	M
	Blainvillea gayana Cass.		Th	M
	Bidens bipinnata L.		Th	E, M
	Bidens chippii (M.B.Moss) Mesfin.		Th	
	Chrysanthellum indicum DC.		Th	M
	Dicoma tomentosa Cass.	Um shoka	Ch	M
	Goniocaulon indicum C. B. Clarke		Ch	M
	Pentanema indicum (L.) Y. Ling		Th	M
	Pseudoconyza viscosa (Mill.) D'Arcy			E, M

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Table 1. *Continued.*

Taxa	Species	Vernacular name	Life form	Uses
	Xanthium strumarium subsp. *brasilicum* (Vell.) O. Bolos & Vigo	Ramtook	Ch	M
	Sonchus oleraceus (L.) L.	Moleita	Th	M
	Vernonia adoensis Schultz-Bip. ex Walp.		Ch	M, O
	Vernonia amygdalina Del.		Ph	M
Order Apiales				
Family Apiaceae				
Subfamily Saniculoideae	*Steganotaenia araliacea* Hochst.	Damin Ashara	Ph	Fu, M